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Research trends in hepatitis C at Pakistan from 2014 – 2018.

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Key words: Hepatitis C. liver diseases, infectious diseases, and epidemiology.

Abstract:

Purpose: This retrospective study, evaluate the publications published in PubMed Indexed journals through authors who participated as the first or as a participatory author associated with institutes functioning in Pakistan.

Methods: The information related to literature in hepatitis C was published, and retrieved on October 1st, 2019 from the PubMed/Medline database to tabulate in Microsoft Excel 2010. Yearly growth of articles, the pattern of authorship, position and participation of the author in manuscript, subject-wise distribution of research, the involvement of institutes, and frequency of journals were objectives from the period 2014 - 2018.

Results: This study showed that 93 institutes are functioning in Pakistan contributed and participated with collaboration nationally and internationally in n=291; 24.2 per annum and 4.8 articles per month and 58.2 average articles are written by 1744; 5.9 authors were published from 2014 – 2018. The institutional repository shows that the majority of articles 134; 46 were written and participated by a single institute. The inclusion of 258; 88.6 authors from the host country as the first author and followed by 11; 3.7 as the second author out of 291 manuscripts shows the severity of the topic. The presence of 280; 96.2 of multi-authorship is strengthened to the importance of collaborative communications in research. Pharmacology 64; 22%, took the importance followed by Hepatology 41; 14%, Community Medicine 34; 11.6% and Chemistry / Biochemistry 30; 10.3% in specialties and subspecialties as a subject out of 23 subjects.

Conclusion: This research shows the timely and significant responses from the researchers of the host country to tackle the burden and shared their part in preventive

and cure measures. Drug therapy, the functioning of laboratories, and the prevailing awareness in society about this disease are on top priority among the common people, Government bodies, and intellectuals of academics.

INTRODUCTION:

According to World Health Organization, hepatitis C is liver disease causes inflammation and infection by a blood-borne virus which can source acute and chronic in severity from mild illness to a life-threatening problem considered as morbidity and mortality globally, through injection for medical purpose, unsafe blood transfusion, sexual practices, and piercing.¹ A study has featured the requirement for a wide-extending determination of anticipation approaches among the community network, healthcare services, and different factors that seem to drive the Pakistan HCV scourge. The information was collected for study from the all individuals from the family unit in 138 urban and 212 rustic zones of 100 districts of four provinces of Pakistan on Importance and commitment of the social network, and medicinal services chance variables for hepatitis C contamination to scale-up HCV treatment level with age, sex, conjugal status and financial status of responders.² Similar to this study a researcher finds 658 records of Egyptian publications on Hepatitis C virus published in PubMed indexed journals with a time limit till 31st March 2013. It shows that Cairo and Ain Shams Universities with the support of the Faculty of Medicine, National Research Center, and National Cancer Institute, were top institutes in publications.³

Social scientists look-after, not only the publications on hepatitis C but paid focused on other types of hepatitis. A study measures the Indian literature published on 'Hepatitis E' in the indexing of the journal in the Web of Science database from 1999 - 2011. A total of 1062 records written by 5725; 5.3 authors in thirteen years, focusing on prolific journals, authors, countries, and institutions were retrieved. The 154; 14.5 articles were published as a maximum in the year 2011 and 44; 4.1 articles published as a minimum in the year 2000. Journal of Medical Virology got first place and published 84; 8% articles out of 20 journals which comprising published articles in double-digit.⁴

Hepatocellular carcinoma (HCC) is a sub-specialty of hepatology. Bibliometric analysis helped to the University of Nanjing to gauge the literature produced by countries, institutes, authors and journals and showed the gap between western countries and China on HCC in 2018. The published data retrieved from the Web of Science Core Collection, study reached on conclusions that research on HCC has been increasing over the past decade. People Republic China, United States, and Japan as three most productive countries, Oncotarget, PLOS One and World Journal of Gastroenterology as journals, and Fudan University, Sun Yat-Sen University and, Second Military Medical University were found top three contributors as institutes.⁵

Bibliometric studies used as common practice in the arena of clinical sciences to estimate the production of evidence-based scientific literature and risk categories. In 2018 Analysts find a national survey of Pakistan 2007 that, Pakistan is fighting with one-tenth burden of hepatitis C Virus and fewer treatment interventions, avoiding considerable WHO HCV elimination targets and scale-up to those with transmission potential will increase further by 2030, and question arises that, what is the present position of that alarming situation?. Therefore the answer is simple that institutes related to Pakistan published 291 manuscripts in journals which indexed in PubMed healthcare database in past five years, even though much literature is pertained and published in the national journals as on the covering field of hepatitis C.⁶ A similar to popular bibliometric style research, a researcher from India did double folded fact-finding study; to the growth of literature worldwide, and specifically India. Data of literature from 1976 to 2015 were collected from PubMed and Web of Science. Till 2008 the production of literature was slow, but after that year researcher contribution and participation was doubled, we can presume the involvement of the World Health Organization in setting targets and goals towards HCV.⁷

METHODOLOGY:

The information of writers, they composed original manuscripts as a first or participatory author with an address of institutes functioning in Pakistan, published in the PubMed listed journals download and classify in MS Office Excel Sheet 2010 from the

PubMed/Medline database. The progressed looking through the system was utilized in PubMed, composed "Hepatitis C" and "Pakistan" in all field menus. Thusly Comma-isolated worth (CSV) document group, Abstract on Note-paid was downloaded with a custom date go from January first, 2014 to 31st December 2018. The compact goals with clear idea were set to find; a) to calculate the year-wise development, b) to inquire the pattern of authorship, c) to assess the position of author in publication, d) to gauge the involvement of institutes in publications, e) to review the subject-wise dissemination of productions, and f) to identify the most productive journals.

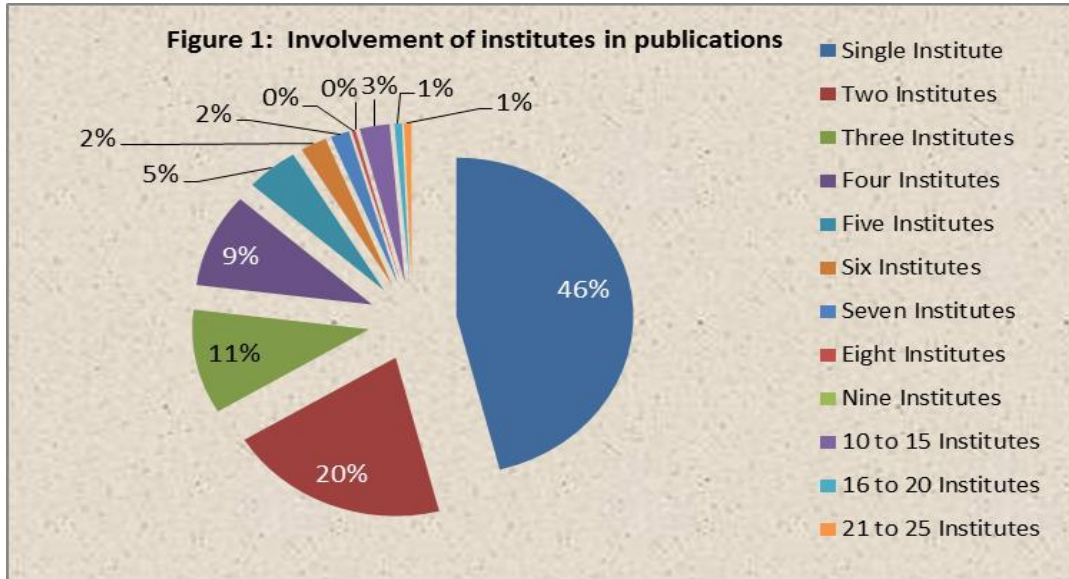
RESULTS

Table 1 elaborate main structure of the study; total 305 original, review articles and case reports were downloaded from the PubMed database, 14 articles were excluded and 291 articles selected for further analysis. There are 1744; 5.9% authors and 793; 2.7% institutes functioning as nationally and internationally partaken in production of 291 publications.

Table 1: Year-wise distribution of publications in research productivity with participation of authors and participations of institutes from 2014 to 2018					
Year	Articles Download	Articles Excluded	Articles included for analysis with %	Total Authors as per Article	Involvement of Institutes in per Article
2018	69	3	66 (22.6)	416 (6.3)	218 (3.3)
2017	68	4	64 (22)	427 (6.6)	198 (3.0)
2016	50	1	49 (16.8)	271 (5.5)	131 (2.6)
2015	65	5	60 (20.6)	309 (5.1)	127 (2.1)
2014	53	1	52 (17.8)	321 (6.1)	119 (2.2)
Total	305	14	291	1744 (5.9)	793 (2.7)

Figure 1 and table 2 displays that 93 institutes working in Pakistan contributed and participated in 291 publications publishing in PubMed indexed journals in collaborative manners with nationally and internationally in research trends in hepatitis C at Pakistan from 2014 – 2018. The 134; 46% articles were published by single institute and 157; 53.9 articles published by majority institutes as collaborative manners out of 291 articles. The

contributions of two institutes present 59; 20.2 articles, followed by three 31; 10.6 institutes.



S. No	Institutes Published	2018	2017	2016	2015	2014	Total
1	Single Institute	20	27	21	35	31	134
2	Two Institutes	18	13	12	10	6	59
3	Three Institutes	8	5	9	5	4	31
4	Four Institutes	8	6	3	5	6	28
5	Five Institutes	4	5	1	1	3	14
6	Six Institutes	2	2	1	2		7
7	Seven Institutes	2	2		1		5
8	Eight Institutes	1					1
9	Nine Institutes	0	0	0	0	0	0
10	10 to 15 Institutes	2	3		1	2	8
11	16 to 20 Institutes			2			2
12	21 to 25 Institutes	1	1				2
Total articles published		66	64	49	60	52	291

Table 3 reveals that 258; 88.6 articles were written by authors affiliated with Pakistani institutes as first author out of 291 articles, followed by 11; 3.7 articles as second author and only 22; 7.5 articles written multi-position authors.

Table 3: Position of author in publications affiliated with institutes functioning in Pakistan. in research 2014 - 2018						
Years	2018	2017	2016	2015	2014	Total
As First Author	59	53	43	54	49	258 (88.6)
As 2 nd Author	2	4	2	2	1	11(3.7)
As 3 rd Author	1	2	2			5 (1.7)
As 4 th Author	1	2		2	1	6 (2)
As 5 th Author	1					2 (0.6)
As 6 th Author				1	1	2 (0.6)
As 7 th Author		1				1 (0.3)
As 8 th Author		1				1 (0.3)
As 9 th Author						
As 10 – 15 Authors	1	1	2	1		5 (1.7)
Total	66	64	49	60	52	291

Figure 2 explained the authorship pattern of researchers. The majority 280; 96.2 articles were written by multi-authors out of 291 articles, only 11; 3.7 articles written by solo or single author. Table 4 disclosed year-wise distribution of authorship pattern

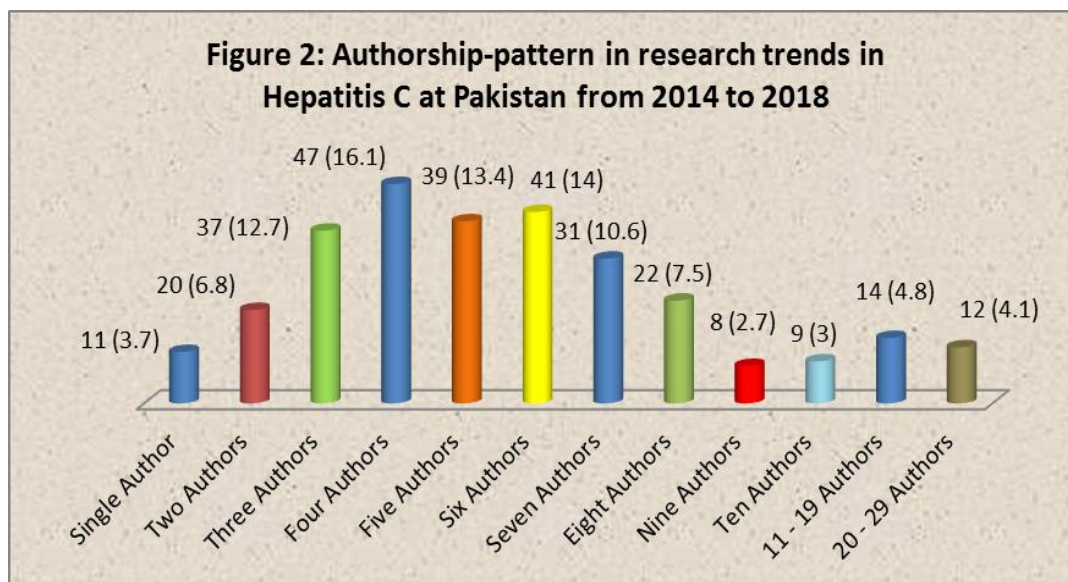


Table 4: Year-wise distribution of authorship pattern							
S. No	Authorship Pattern	2018	2017	2016	2015	2014	Total
1	Single Author		2	3	5	1	11
2	Two Authors	7	5	4	2	2	20
3	Three Authors	10	5	2	11	9	37
4	Four Authors	12	7	11	7	10	47
5	Five Authors	4	10	7	12	6	39
6	Six Authors	9	11	8	9	4	41
7	Seven Authors	8	7	6	4	6	31
8	Eight Authors	3	3	5	4	7	22
9	Nine Authors	2	3	1	2		8
10	Ten Authors	4	4		1		9
11	11 - 19 Authors	4	5	2	3		14
12	20 - 29 Authors	3	2			7	12
Total		66	64	49	60	52	291

Table 4 presents that 124; 42.6% of articles published by six institutes out of ninety three institutes and 167; 57.3% of articles published by 87 institutes out of 291 articles. National University of Sciences and Technology, Islamabad Pakistan published 38; 13% of articles as lead followed by University of the Punjab, Lahore 28; 9.6%.

S. No	Table 4: Research productivity of the institutes functioning in Pakistan during the years 2014 – 2018.	Articles
1	National University of Sciences and Technology, Islamabad Pakistan	38 (13)
2	University of the Punjab, Lahore Pakistan	28 (9.6)
3	The Aga Khan University and Hospital, Karachi, Pakistan	22 (7.5)
4	Government College University, Faisalabad	16 (5.5)
5	University of Management and Technology (UMT) , Lahore	11 (3.7)
6	Quaid-i-Azam University Islamabad, Islamabad	9 (3)
7	03 Different institutes published 06 papers	18 (6.1)
8	04 Different institutes published 05 papers	20 (6.8)
9	07 Different institutes published 04 papers	28 (9.6)
10	06 Different institutes published 03 papers	18 (6.1)
11	16 Different institutes published 02 Papers	32 (11)
12	51 Different institutes published 01 paper	51 (17.5)
		291

Table 5 shows the subject-wise distribution of articles. In this study researcher contributed and participated in 37 subjects related to hepatitis C and Pharmacology got the lead and published 64; 22% publications as a subject, followed by Hepatology 41; 14% and Community Medicine 34; 11.6% relatively out of 37 subjects. A bibliometric analysis using the original articles indexed in Web of Science research on Sofosbuvir for the period of 2010–2017. Sofosbuvir is an important drug used for the treatment of hepatitis C. The 2044 authors published 341 articles associated with 46 different countries published in 126 journals. Hepatology, Gastroenterology, and Journal of Hepatology were counted as most prolific journals.⁸

S. No	Table-5; Subject-wise distribution of publications (Largest to smallest, n=291)	Publications with %	
1	Pharmacology	64	21.99%
2	Hepatology	41	14.09%
3	Community Medicine	34	11.68%
4	Chemistry / Biochemistry	30	10.31%
5	Genetics	21	7.22%
6	Hematology	19	6.53%
7	Virology	18	6.19%
8	Microbiology	14	4.81%
9	Endocrinology	10	3.44%
10	Epidemiology	7	2.41%
11	Infectious Diseases	7	2.41%
12	Gastroenterology	6	2.06%
13	Immunology, Obstetrics and Serology ((Three articles for each)	3	1.03%
14	Medical Education, Nephrology and Urology ((Two articles for each)	2	0.69%
15	Bacteriology, Biosciences, Biotechnology, Ophthalmology and Radiology (One article for each)	1	0.34%
	Total Articles	291	

A total of 136 journals were published 291 articles during the period 2014 – 2018 as attached with a PubMed database. Table 6 explained that n=90; 31%, articles were published in seven journals and 201; 69% of journals published 129 articles out of 291 articles. Maximum n=20; 6.8% articles were published by Pakistan Journal of Medical Sciences and minimum n=7; 2.4% produced in World Journal of Gastroenterology.

S. No	Table 6: Research published in journals from 2014 – 2018.	Article	%
1	Pakistan Journal of Medical Sciences	20	6.87%
2	Viral Immunology	17	5.84%
3	Journal of Ayub Medical College, Pakistan	13	4.47%
4	Pakistan Journal of Pharmaceutical Sciences	13	4.47%
5	Journal of Pakistan Medical Association	12	4.12%
6	Hepatitis Monthly Journal	8	2.75%
7	World Journal of Gastroenterology	7	2.41%
8	03 Journals Published 06 Articles	18	6.19%
9	04 Journals Published 05 Articles	20	6.87%
10	04 Journals Published 04 Articles	16	5.50%
11	08 Journals Published 03 Articles	24	8.25%
12	13 Journals Published 02 Articles	26	8.93%
13	97 Journals Published 01 Article each	97	33.33%
		291	

DISCUSSION & CONCLUSION: A study revealed that the institutional collaboration of developing countries with international academia in research has an impact on the quality production of publications.⁹ The involvement of 93; 11.7% Pakistani institutes displayed the profound association in presenting 291 articles out of 793 national and international institutes with an understanding of problem of healthcare in society. The research-based laboratories promote the understanding of the concept of science, emerging of current issues, the impact of the problem and its solution with motivational abilities, and an interest in practical skills.¹⁰ The majority of research publications are linked with laboratories, only a few papers reflected the importance of awareness among the patients and non-patients, drug therapy and public healthcare sectors. Four journals affiliated with the host country and indexed in the PubMed database published 58; 20% articles out of 291 articles and 136 journals. Authors associated with Pakistani institutes as a first author published 258; 88.6% and followed by 11; 3.7% article as the second author out of 291 articles indicate the significance of collaboration and participation in research or problem. The concept of research, availability of laboratory equipment, the severity of the problem, easy access to information communication technologies, guidelines from national and international healthcare bodies, and determination of researchers are the main reasons to produce 291 publications in publishing for world view and feedback.

DISCLAIMER: The researchers have no intention to declined growth of any organization, city, country and standards, this study presents only numbers.

CONFLICT OF INTEREST: None to declare.

FUNDING DISCLOSURE: None to declare

AUTHORS CONTRIBUTION: Baladi. Z, analyzed, interpreted data and literature review.
Zia Ahmed retrieved data from PubMed database.

REFERENCES:

<https://www.who.int/news-room/fact-sheets/detail/hepatitis-c>

Trickey A, May MT, Davies C, Qureshi H, Hamid S, Mahmood H, Saeed Q, Hickman M, Glass N, Averhoff F, Vickerman P. Importance and contribution of community, social, and healthcare risk factors for hepatitis C infection in Pakistan. *The American Journal of Tropical Medicine and Hygiene*. 2017 Dec 6; 97(6):1920-8.

El-Din HM, Eldin AS, Hanora AM. Bibliometric analysis of Egyptian publications on Hepatitis C virus from PubMed using data mining of an in-house developed database (HCVDBegy). *Scientometrics*. 2016 Aug 1; 108(2):895-915.

Wani ZA. Bibliometric analysis of hepatitis e literature. *International Journal of Information Dissemination and Technology*. 2018 Mar 10;7(4):242-6.

Miao Y, Zhang Y, Yin L. Trends in hepatocellular carcinoma research from 2008 to 2017: a bibliometric analysis. *PeerJ*. 2018 Aug 15;6:e5477.

Lim AG, Qureshi H, Mahmood H, Hamid S, Davies CF, Trickey A, Glass N, Saeed Q, Fraser H, Walker JG, Mukandavire C. Curbing the hepatitis C virus epidemic in Pakistan: the impact of scaling up treatment and prevention for achieving elimination. *International Journal of Epidemiology*. 2018 Jan 3;47(2):550-60.

Sangam SL, Arali UB, Patil CG, Rousseau R. Growth of the hepatitis literature over the period 1976–2015: What can the relative priority index teach us? *Scientometrics*. 2018 Apr 1;115(1):351-68.

Hernández-Vásquez A, Rosselli D. A bibliometric analysis of the global research on sofosbuvir. *F1000Research*. 2017;6.

Sabah F, Hassan SU, Muazzam A, Iqbal S, Soroya SH, Sarwar R. Scientific collaboration networks in Pakistan and their impact on institutional research performance. *Library Hi Tech*. 2019 Mar 18.

Hofstein A, Mamlok-Naaman R. The laboratory in science education: the state of the art. *Chemistry Education Research and Practice*. 2007;8(2):105-7.